We claim:

1. A method of forming an encapsulated fiber batt comprising:

conveying a fiber batt in a first direction, the fiber batt having a first and second major surfaces and two minor surfaces, the major surfaces having a substantially horizontal orientation;

passing the fiber batt past a foam application assembly, the foam application assembly being arranged and configured to form a polymeric foam on at least one surface of the fiber batt; and

curing the polymeric foam to form a foam layer.

2. A method of forming an encapsulated fiber batt according to claim 1, wherein:

the polymeric foam is applied to the fiber batt as a foaming mixture, the foaming mixture expanding substantially after being applied to the fiber batt.

3. A method of forming an encapsulated fiber batt according to claim 2, wherein:

the foaming mixture increases in volume by at least 200% after application to the fiber batt.

4. A method of forming an encapsulated fiber batt according to claim 1, wherein:

the polymeric foam is applied to the fiber batt as a foam layer, the foam layer exhibiting only minor expansion after being applied to the fiber batt.

5. A method of forming an encapsulated fiber batt according to claim 4, wherein:

the foam layer increases in volume by no more than 20% after application to the fiber batt.

6. A method of forming an encapsulated fiber batt according to claim 1, wherein:

the polymeric foam includes at least one polymer selected from a group consisting of water soluble, water emulsifable and water dispersible polymers and prepolymers.

7. A method of forming an encapsulated fiber batt according to claim 6, wherein:

the polymeric foam includes at least one polymer selected from a group consisting of phenolic binders, urea formaldehyde binders, urea extended phenolic binders, polycarboxylic based binders, styrene butadiene rubbers, natural rubbers, polyvinyl chlorides (PVC), polyethylenes (PE), polypropylenes (PP), poly(ethylene-maleic acid) co-polymers, poly(styrene-maleic acid) co-polymers, polyvinyl alcohols (PVA), ethylene/vinyl acetate (EVA), ethylene-propylene copolymers, polyesters, polyethylene terephthalates (PET), nylon polyacrylic acids, polyvinyl acetates and salts thereof.

8. A method of forming an encapsulated fiber batt according to claim 1, wherein:

the polymeric foam is deposited on the first major surface and both minor surfaces.

9. A method of forming an encapsulated fiber batt according to claim 1, wherein:

the polymeric foam is deposited on all exposed surfaces of the fiber batt.

10. A method of forming an encapsulated fiber batt according to claim 8, further comprising:

attaching a premanufactured sheet material to the second major surface.

11. A method of forming an encapsulated fiber batt according to claim 10, further comprising:

depositing the polymeric foam on at least a portion of the premanufactured sheet material attached to the second major surface.

12. A method of forming an encapsulated fiber batt according to claim 10, wherein:

attaching the sheet material includes

dispensing a vapor retarding layer from a vapor retarder supply;

applying an adhesive to a first surface of the vapor retarding layer;

forcing the first surface of the vapor retarding layer against the second major surface of the fiber batt at an application pressure and for an application time period sufficient to adhere the vapor retarding layer to the fiber batt.

13. A method of forming an encapsulated fiber batt according to claim 12, wherein:

the adhesive includes a hot-melt adhesive and is applied to the first surface by ejecting a stream liquid hot-melt adhesive through a nozzle toward the vapor retarding layer.

14. A method of forming an encapsulated fiber batt according to claim 13, wherein:

the nozzle is a melt-blown application assembly.

15. A method of forming an encapsulated fiber batt according to claim 1, wherein:

the polymeric foam is applied to the fiber batt at a rate measured in mass per batt area, the rate being between about 1 g/m^2 and 200 g/m^2.

16. A method of forming an encapsulated fiber batt according to claim 15, wherein:

the polymeric foam is applied a first surface of the fiber batt at a first rate R_1 measured in mass per batt area, the first rate being between about 1 g/m^2 and 200 g/m^2;

the polymeric foam is applied a second surface of the fiber batt at a second rate R_2 measured in mass per batt area, the first rate being between about 1 g/m^2 and 200 g/m^2, wherein R_1 and R_2 differ by at least 15%.

17. A method of forming an encapsulated fiber batt according to claim 15, wherein:

a first polymeric foam is applied a first surface of the fiber batt at a first rate R_1 measured in mass per batt area, the first rate being between about 1 g/m^2 and 200 g/m^2;

a second polymeric foam is applied a second surface of the fiber batt at a second rate R_2 measured in mass per batt area, the first rate being between about 1 g/m^2 and 200 g/m^2.

18. A method of forming an encapsulated fiber batt according to claim 17, wherein:

the first and second polymeric foams include different primary polymers.

19. A method of forming an encapsulated fiber batt according to claim 17, wherein:

the first and second polymeric foams include first and second concentrations of the same primary polymer, the first and second concentrations differing by at least 10%.

20. A method of forming an encapsulated fiber batt according to claim 1, wherein:

the polymeric foam has a blow ratio of between about 4 and 50.

21. A method of forming an encapsulated fiber batt according to claim 17, wherein:

the first polymeric foam has a first blow ratio BR_1 of between about 4 and 50;

the second polymeric foam has a second blow ratio BR_2 of between about 4 and 50;

wherein BR_1 and BR_2 differ by at least about 10%.

22. A method of forming an encapsulated fiber batt according to claim 10, wherein:

the sheet material is selected from a group consisting of vapor retarding layers, kraft paper, vapor permeable layers and liquid permeable layers.

23. A method of forming a plurality of encapsulated fiber batts comprising:

conveying a primary fiber batt in a first direction, the fiber batt having a first and second major surfaces and two minor surfaces, the major surfaces having a substantially horizontal orientation;

passing the primary fiber batt past first foam application assemblies, the first foam application assemblies being arranged and configured to apply a polymeric foam to the major surfaces of the primary fiber batt;

separating the primary fiber batt into a plurality of secondary fiber batts, each of the secondary fiber batts including first and second major surfaces and first and second minor surfaces, wherein the first and second minor surfaces of adjacent batts are opposed;

separating the opposed surfaces of adjacent secondary fiber batts to expose the minor surfaces of the secondary fiber batts;

passing the exposed minor surfaces of the secondary fiber batts past second foam application assemblies, the second foam application assemblies being arranged and configured to apply a polymeric foam to the exposed minor surfaces of the secondary fiber batts;

thereby completely encapsulating each of the secondary fiber batts in a polymeric foam layer.

24. A method of forming a plurality of encapsulated fiber batts according to claim 23, wherein:

separating the opposed surfaces of adjacent secondary fiber batts to expose the minor surfaces of the secondary fiber batts includes raising a first group of the secondary fiber batts relative to a second group of the secondary fiber batts.

25. A method of forming a plurality of encapsulated fiber batts according to claim 23, wherein:

separating the opposed surfaces of adjacent secondary fiber batts to expose the minor surfaces of the secondary fiber batts includes lowering a first group of the secondary fiber batts relative to a second group of the secondary fiber batts.

26. A method of forming a plurality of encapsulated fiber batts according to claim 23, wherein:

separating the opposed surfaces of adjacent secondary fiber batts to expose the minor surfaces of the secondary fiber batts includes raising a first group of the secondary fiber batts relative to the primary fiber batt and lowering a second group of the secondary fiber batts relative to the primary fiber batt.

27. A method of forming a plurality of encapsulated fiber batts according to claim 23, wherein:

separating the opposed surfaces of adjacent secondary fiber batts to expose the minor surfaces of the secondary fiber batts includes rotating the secondary fiber batts in a first rotational direction.

28. A method of forming a plurality of encapsulated fiber batts according to claim 27, wherein:

separating the opposed surfaces of adjacent secondary fiber batts to expose the minor surfaces of the secondary fiber batts includes rotating the secondary fiber batts in a first rotational direction and subsequently rotating the secondary fiber batts in a second rotational direction, the second rotational direction being opposite the first rotational direction.

29. A method of forming a plurality of encapsulated fiber batts according to claim 23, wherein:

separating the opposed surfaces of adjacent secondary fiber batts to expose the minor surfaces of the secondary fiber batts includes increasing the horizontal spacing between adjacent secondary fiber batts.

30. A method of forming a plurality of encapsulated fiber batts according to claim 23, wherein:

passing the exposed minor surfaces of the secondary fiber batts past second foam application assemblies includes passing the first minor surfaces of the secondary fiber batts past a first portion of the second foam application assemblies;

conveying the secondary fiber batts an additional distance in the first direction; and then

passing the second minor surfaces of the secondary fiber batts past a second portion of the second foam application assemblies to complete the encapsulation of the secondary fiber batts.

31. A method of forming a plurality of encapsulated fiber batts according to claim 23, wherein:

passing the exposed minor surfaces of the secondary fiber batts past second foam application assemblies includes passing the exposed minor surfaces of a first group of the

secondary fiber batts past a first portion of the second foam application assemblies to complete the encapsulation of the first group of secondary fiber batts;

conveying the secondary fiber batts an additional distance in the first direction; and then

passing the exposed minor surfaces of a second group of the secondary fiber batts past a second portion of the second foam application assemblies to complete the encapsulation of the second group of the secondary fiber batts.